

REMARKS

The invention centers on novel interconnect structures having an anti-fuse formed as a layer having openings that define via locations. The structures of the invention advantageously incorporate anti-fuses at reduced manufacturing cost.

Dixit et al. (US Pat. 5233217) discloses conventional anti-fuse structures where the antifuse material is deposited into formed vias. Dixit et al. does not disclose or suggest or suggest an antifuse layer which defines interconnect via locations and is also an antifuse. Applicants specifically note that layer 11 of Figure 1 G does not form part of an antifuse path.

Chang et al. (US Pat. 5807786) discloses antifuse structures using various antifuse materials. Chang et al. does not disclose or suggest or suggest an antifuse layer which defines interconnect via locations and is also an antifuse. The combination of the teachings of Dixit et al. and Chang et al. would still result in a structure lacking antifuse layer which defines interconnect via locations and is also an antifuse.

Go et al. (US Pat. 5592016) discloses anti-fuse structures which are located above or below vias. Go et al. does not disclose or suggest or suggest an antifuse layer which defines interconnect via locations and is also an antifuse. Applicants submit that the combination of Go et al. with Dixit et al. would only result in conventional antifuses of Go et al. being formed in combination with damascene interconnect structures.

Shroff et al. (US Pat. 6515343) discloses various antifuse structures and materials. Shroff et al. does not disclose or suggest or suggest an antifuse layer

which defines interconnect via locations and is also an antifuse. Applicants submit that the combination of Shroff et al. with Dixit et al. would only result in conventional antifuses of Shroff et al. being formed in combination with damascene interconnect structures.

For the above reasons, applicants submit that the present claims are patentable over the prior art of record and that the application is in condition for allowance. Such allowance is earnestly and respectfully solicited.

Respectfully submitted,
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